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1: J Invest Dermatol. 1994 Aug;103(2):240-7.

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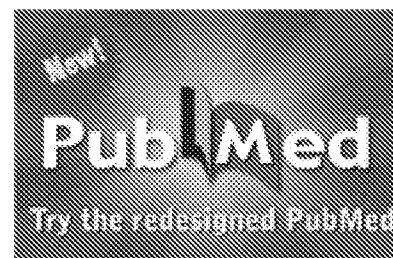
Topography of mammalian connexins in human skin.

Salomon D, Masgrau E, Vischer S, Ullrich S, Dupont E, Sappino P, Saurat JH, Meda P.

Clinique de Dermatologie, Hôpital Cantonal Universitaire, Genève, Switzerland.

We have explored the expression of gap junction proteins in normal human skin by immunostaining cryostat sections (indirect immunofluorescence) or lyophilized epidermis (Western blotting) with antibodies against four mammalian connexins Cx26, Cx32, Cx40, Cx43; and by hybridizing total epidermal RNA (Northern blotting) with cRNA probes for Cx26, Cx32, and Cx43. We found that epidermal keratinocytes express Cx43 but not Cx26, Cx32, or Cx40. This expression was minimal in the basal layer, much higher in the spinous layer, reduced in the granular layer, and absent in the stratum corneum. Immunostaining for Cx43 was also observed in sebaceous glands, hairs, and eccrine sweat ducts. The two latter epidermal adnexae were also markedly labeled by antibodies against Cx26, a gap junction protein that was undetectable by immunofluorescence in interfollicular keratinocytes. Immunoblots of polyacrylamide gel electrophoresis-separated epidermal proteins and hybridization of epidermal RNA confirmed the presence of Cx43 in epidermis. These observations indicate that 1) Cx43 and Cx26 are components of human keratinocyte gap junctions; 2) these two proteins are differentially expressed in the interfollicular epidermis and the skin adnexae; 3) in interfollicular epidermis, Cx43 is a predominant gap junction protein, mostly expressed by the differentiating spinous cells; 4) Cx43 distribution is in accordance with the extensive dye coupling previously observed in this epidermal compartment.

PMID: 7518858 [PubMed - indexed for MEDLINE]



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